WHAT IS CLAIMED IS:

1. A method comprising:

reading a first copy of a primary data set in a primary memory location;

storing the first copy in a first memory location;

setting a first validity flag to indicate that the first copy is valid;

reading a second copy of the primary data set in the primary memory location;

storing the second copy in a second memory location;

setting a second validity flag to indicate that the second copy is valid;

modifying the first copy; and

setting the second validity flag to indicate that the second copy is invalid after modifying the first copy.

2. The method of claim 1, further comprising:

replacing the primary data set with the modified first copy after the modifying of the first copy and before the setting of the second validity flag to indicate that the second copy is invalid;

replacing the second copy with the primary data set after the setting of the second validity flag to indicate that the second copy is invalid; and

setting the second validity flag to indicate that the second copy is valid after replacing the second copy with the primary data set.

3. The method of claim 2, wherein a first program is associated with the first copy, and a second program is associated with the second copy.

4. The method of claim 1, wherein replacing the second copy with the primary data set further comprises:

reading the second validity flag in response to a program requesting access to the second copy; and

replacing the second copy with the primary data set before granting the access request if the second validity flag indicates that the second copy is invalid.

5. The method of claim 2, further comprising:

creating a first index corresponding to the first copy, wherein the first index is stored in a fourth memory location, wherein the first index is created after reading the first copy from the primary data set; and

creating a second index corresponding to the second copy, wherein the second index is stored in the fourth memory location, wherein the second index is created after reading the second copy from the primary data set.

6. The method of claim 5, further comprising:

locating the second validity flag by using the second index before setting the second validity flag to indicate that the second copy is invalid.

7. The method of claim 6, wherein an index comprises:

a first field comprising a description of a copy of the data for which the index was created; and

a second field comprising a memory location for a validity flag for the copy of the data set for which the index was created.

8. The method of claim 7, further comprising:

matching the first index and the second index by comparing the first field of the first index and the first field of the second index; and

wherein locating the second validity flag further comprises locating the second validity flag by referencing contents of the second field of the second index.

9. The method of claim 8, further comprising:

reading and storing a plurality of copies of the primary data set at respective memory locations;

setting a validity flag to indicate the copy is valid in response to reading and storing the copy; and

creating an index to the copy in the fourth memory location in response to reading and storing the copy.

10. The method of claim 9, further comprising:

setting the validity flag of every copy other than the first copy to invalid after modifying the first copy.

11. The method of claim 8, wherein a first program is associated with the first copy and a second program is associated with the second copy.

12. The method of claim 11, further comprising:

the first program requesting that a third program synchronize the first copy with other copies of the primary data set;

the third program creating the first index corresponding to the first copy in the fourth memory location in response to the first program requesting that the third program synchronize the first copy with other copies of the primary data set;

the second program requesting that the third program synchronize the second copy with other copies of the primary data set; and

the third program creating the second index corresponding to the second copy in the fourth memory location in response to the second program requesting that the third program synchronize the second copy with other copies of the primary data set.

13. The method of claim 11, further comprising:

the first program modifying the first copy;

the first program replacing the primary data set with the first copy;

the first program notifying a third program that the primary data set has been modified; and

the third program setting the second validity flag to indicate that the second copy is invalid in response to the first program notifying the third program that the primary data set has been modified, wherein the third program is configured to manage the synchronization of copies of data sets.

14. The method of claim 13, further comprising:

the second program notifying the third program that the second program desires to access the second copy;

the third program reading the second validity flag;

the third program notifying the second program that the second copy is invalid when the second validity flag is invalid;

the second program reading the primary data set and replacing the second copy with the primary data set;

the third program setting the second validity flag to indicate that the second copy is valid; and

the second program accessing the second copy when the second validity flag is valid.

15. The method of claim 13, further comprising:

the second program reading the second validity flag;

the second program reading the primary data set and replacing the second copy with the primary data set when the second validity flag is invalid; and

the second program setting the second validity flag to valid.

16. The method of claim 11, wherein the first program and the second program are executable on a computer system, wherein the computer system is a cluster, and wherein the cluster comprises:

a plurality of computers, wherein a computer comprises a local memory and at least one validity flag, and wherein a copy of a data set that is stored in the local memory is assigned at least one corresponding validity flag;

a coupling system comprising a local memory, wherein the coupling system is connected to each of the computers in the cluster, and wherein the coupling system is configured to coordinate data sharing of the cluster; and

an external data storage shared by the computers in the cluster.

17. The method of claim 16, wherein each computer further comprises a coupling system interface program configured to communicate between the coupling system and a plurality of programs running on the computer.

18. The method of claim 17, wherein the coupling system interface program establishes and maintains a communications link to the coupling system.

19. The method of claim 17, wherein the local memory of a first computer in the cluster comprises the first memory location, the local memory of a second computer in the cluster comprises the second memory location, the external data storage comprises the primary memory location, and the local memory of the coupling system comprises the fourth memory location.

20. The method of claim 19, further comprising creating a copy of the primary data set in the local memory of a plurality of computers in the cluster, wherein the creation of the copy comprises:

creating an index corresponding to the copy of the primary data set in the local memory of the coupling system;

assigning a validity flag to the copy of the primary data set; and

setting the validity flag to indicate that the copy of the primary data set is valid.

21. The method of claim 20, further comprising:

setting the validity flag of every copy other than the first copy is set to invalid after modifying the first copy.

22. The method of claim 19, wherein the first computer further comprises a first program associated with the first copy, and the second computer further comprises a second program associated with the second copy.

23. The method of claim 22, further comprising:

the first program reading the first copy of the primary data set from the primary data set in the primary memory location;

the first program storing the first copy in the first memory location;

the first program creating the first index to the first copy;

the first program sending a request to synchronize the first copy with other copies of the primary data set to the coupling system interface, the request comprising sending the first index to a third program;

the coupling system interface program forwarding the request to synchronize the first copy to the coupling system;

the coupling system storing the first index to the first copy in the fourth memory location in response to the request;

the coupling system sending a first token to the coupling system interface, the first token comprising a location for the validity flag to be used for the first copy;

the coupling system interface program sending the first token to the first program;

the first program storing the first token in the first memory;

the second program reading the second copy of the primary data set from the primary data set in the primary memory location;

the second program storing the second copy in the second memory location;

the second program creating the second index to the second copy;

the second program sending a request to synchronize the second copy with other copies of the primary data set to the coupling system interface, the request comprising sending the second index to the third program;

the coupling system interface program forwarding the request to synchronize the second copy to the coupling system;

the coupling system storing the second index to the second copy in the fourth memory location in response to the request;

the coupling system sending a second token to the coupling system interface, the second token comprising a location for the validity flag to be used for the second copy;

the coupling system interface program sending the second token to the second program; and

the second program storing the second token in the second memory.

24. The method of claim 22, further comprising:

the first program modifying the first copy;

the first program replacing the primary data set with the first copy;

the first program notifying the coupling system interface program that the primary data set has been modified;

the coupling system interface program notifying the coupling system that the primary data set has been modified; and

the coupling system setting the second validity flag to indicate that the second copy is invalid in response to the first program notifying the coupling system interface program that the primary data set has been modified.

25. The method of claim 22, further comprising:

the second program reading the second validity flag;

the second program replacing the second copy with the primary data set when the second validity flag is invalid; and

the second program setting the second validity flag to valid.

26. The method of claim 21, further comprising:

the second program notifying the coupling system interface program that the second program desires to access the second copy;

the coupling system interface program reading the second validity flag;

the coupling system interface program notifying the second program that the second copy is invalid when the second validity flag is invalid;

the second program replacing the second copy with the primary data set;

the coupling system interface program setting the second validity flag to indicate that the second copy is valid; and

the second program accessing the second copy when the second validity flag is valid.

27. The method of claim 18, wherein the coupling system interface program comprises a plurality of functions and an application programming interface, wherein each function is configured to perform at least one data synchronization task, and wherein the application programming interface is comprised of a plurality of function calls configured to provide external access to the functions, and wherein the function calls are accessible to a plurality of application programs.

28. The method of claim 1, wherein the primary data set is a data record.

29. The method of claim 1, wherein the primary data set is a data group.

30. The method of claim 1, wherein the primary data set is a data table.

31. A system comprising:

a plurality of computers comprising a cluster, wherein a computer comprises a local memory and at least one validity flag, and wherein a copy of a data set that is stored in the local memory is assigned at least one corresponding validity flag;

a coupling system comprising a local memory, wherein the coupling system is connected to each of the computers in the cluster, and wherein the coupling system is configured to coordinate data sharing of the cluster; and

an external data storage shared by the computers in the cluster;

wherein the local memories of the computers or the coupling system store program instructions, wherein the program instructions are executable by the computers or the coupling system to:

read a first copy of a primary data set in a primary memory location;

store the first copy in a first memory location;

set a first validity flag to indicate that the first copy is valid;

read a second copy of the primary data set in the primary memory location;

store the second copy in a second memory location;

set a second validity flag to indicate that the second copy is valid;

modify the first copy; and

set the second validity flag to indicate that the second copy is invalid after modifying the first copy.

32. The system of claim 31, wherein the program instructions are further executable to:

replace the primary data set with the modified first copy after the modifying of the first copy and before the setting of the second validity flag to indicate that the second copy is invalid;

replace the second copy with the primary data set after the setting of the second validity flag to indicate that the second copy is invalid; and

set the second validity flag to indicate that the second copy is valid after replacing the second copy with the primary data set.

33. The system of claim 32, wherein the program instructions further comprise a first program associated with the first copy and a second program associated with the second copy.

34. The system of claim 32, wherein in replacing the second copy with the primary data set, the program instructions are further executable to:

read the second validity flag in response to a program requesting access to the second copy; and

replace the second copy with the primary data set before granting the access request if the second validity flag indicates that the second copy is invalid.

35. The system of claim 32, wherein the program instructions are further executable to:

create a first index corresponding to the first copy, wherein the first index is stored in a fourth memory location, wherein the first index is created after reading the first copy from the primary data set; and

create a second index corresponding to the second copy, wherein the second index is stored in the fourth memory location, wherein the second index is created after reading the second copy from the primary data set.

36. The system of claim 35, wherein the program instructions are further executable to:

locate the second validity flag by using the second index before setting the second validity flag to indicate that the second copy is invalid.

37. The system of claim 36, wherein an index comprises:

a first field comprising a description of a copy of the data the index was created for; and

a second field comprising a memory location for a validity flag for the copy of the data set the index was created for.

38. The system of claim 37, wherein in locating the second validity flag, the program instructions are further executable to:

match the first index and the second index by comparing the first field of the first index and the first field of the second index; and

locate the second validity flag by referencing contents of the second field of the second index.

39. The system of claim 38, wherein the program instructions are further executable to:

read and store a plurality of copies of the primary data set at respective memory locations;

set a validity flag to indicate the copy is valid in response to reading and storing the copy; and

create an index to the copy in the fourth memory location in response to reading and storing the copy.

40. The system of claim 39, wherein the program instructions are further executable to:

set the validity flag of every copy other than the first copy to invalid after modifying the first copy.

41. The system of claim 37, wherein the program instructions further comprise a first program associated with the first copy and a second program associated with the second copy.

42. The system of claim 41, wherein the program instructions further comprise a third program, wherein the third program is configured to manage the synchronization of copies of data sets being used by the first and second programs.

43. The system of claim 42,

wherein the first program is executable to request that the third program synchronize the first copy with other copies of the data set;

wherein the third program is executable to create the first index corresponding to the first copy in the fourth memory location in response to the first program requesting that the third program synchronize the first copy with other copies of the data set;

wherein the second program is executable to request that the third program synchronize the second copy with other copies of the primary data set; and

wherein the third program is executable to create the second index corresponding to the second copy in the fourth memory location in response to the second program requesting that the third program synchronize the second copy with other copies of the data set.

44. The system of claim 42,

wherein the first program is executable to:

modify the first copy;

replace the primary data set with the first copy;

notify the third program that the primary data set has been modified; and

wherein the third program is executable to set the second validity flag to indicate that the second copy is invalid in response to the first program notifying the third program that the primary data set has been modified.

45. The system of claim 44,

wherein the second program is executable to notify the third program that the second program desires to access the second copy;

wherein the third program is executable to:

read the second validity flag; and

notify the second program that the second copy is invalid when the second validity flag is invalid;

wherein the second program is executable to replace the second copy with the primary data set;

wherein the third program is executable to set the second validity flag to indicate that the second copy is valid; and

wherein the second program is executable to access the second copy when the second validity flag is valid.

46. The system of claim 44, wherein the second program is executable to:

read the second validity flag;

replace the second copy with the primary data set when the second validity flag is invalid; and

set the second validity flag to valid.

47. The system of claim 31, wherein each computer further stores a coupling system interface program which is executable to communicate between the coupling system and a plurality of programs running on the computer.

48. The system of claim 47, wherein the coupling system interface program is executable to establish and maintain a communications link to the coupling system.

49. The system of claim 47, wherein the local memory of a first computer in the cluster comprises the first memory location, the local memory of a second computer in the cluster comprises the second memory location, the external data storage comprises the primary memory location, and the local memory of the coupling system comprises the fourth memory location.

50. The system of claim 49, wherein the program instructions are further executable to create a copy of the primary data set in the local memory of a plurality of computers in the cluster, wherein in creating the copy, the program instructions are further executable to:

create an index corresponding to the copy of the primary data set in the local memory of the coupling system;

assign a validity flag to the copy of the primary data set; and

set the validity flag to indicate that the copy of the primary data set is valid.

51. The system of claim 50, wherein the program instructions are further executable to set the validity flag of every copy other than the first copy to invalid after modifying the first copy.

52. The system of claim 50, wherein the first computer further includes a first program associated with the first copy, and the second computer further includes a second program associated with the second copy.

53. The system of claim 52,

wherein the first program is executable to:

read the first copy of the data set from the primary data set in the primary memory location;

store the first copy in the first memory location;

create the first index to the first copy; and

send a request to synchronize the first copy with other copies of the data set to the coupling system interface, wherein the first program is executable to send the first index to a third program;

wherein the coupling system interface program is executable to forward the request to synchronize the first copy to the coupling system;

wherein the coupling system is executable to:

store the first index to the first copy in the fourth memory location in response to the request; and

send a first token to the coupling system interface, the first token comprising a location for the validity flag to be used for the first copy;

wherein the coupling system interface program is executable to send the first token to the first program;

wherein the first program is executable to store the first token in the first memory;

wherein the second program is executable to:

read the second copy of the primary data set from the primary data set in the primary memory location;

store the second copy in the second memory location;

create the second index to the second copy; and

send a request to synchronize the second copy with other copies of the primary data set to the coupling system interface, wherein the second program is executable to send the second index to the third program;

wherein the coupling system interface program is executable to forward the request to synchronize the second copy to the coupling system;

wherein the coupling system is executable to:

store the second index to the second copy in the fourth memory location in response to the request; and

send a second token to the coupling system interface, the second token comprising a location for the validity flag to be used for the second copy;

wherein the coupling system interface program is executable to send the second token to the second program; and

wherein the second program is executable to store the second token in the second memory.

54. The system of claim 52,

wherein the first program is executable to:

modify the first copy;

replace the primary data set with the first copy; and

notify the coupling system interface program that the primary data set has been modified;

wherein the coupling system interface program is executable to notify the coupling system that the primary data set has been modified; and

wherein the coupling system is executable to set the second validity flag to indicate that the second copy is invalid in response to the first program notifying the coupling system interface program that the primary data set has been modified.

55. The system of claim 52, wherein the second program is executable to:

read the second validity flag;

replace the second copy with the primary data set when the second validity flag is invalid; and

set the second validity flag to valid.

56. The system of claim 51,

wherein the second program is executable to notify the coupling system interface program that the second program desires to access the second copy;

wherein the coupling system interface program is executable to:

read the second validity flag; and

notify the second program that the second copy is invalid when the second validity flag is invalid;

wherein the second program is executable to replace the second copy with the primary data set;

wherein the coupling system interface program is executable to set the second validity flag to indicate that the second copy is valid; and

wherein the second program is executable to access the second copy when the second validity flag is valid.

57. The system of claim 48, wherein the coupling system interface program comprises a plurality of functions and an application programming interface, wherein each function is configured to perform at least one data synchronization task, and wherein the application programming interface is comprised of a plurality of function calls configured to provide external access to the functions, and wherein the function calls are accessible to a plurality of programs.

58. The system of claim 31, wherein the primary data set is a data record.

59. The system of claim 31, wherein the primary data set is a data group.

60. The system of claim 31, wherein the primary data set is a data table.

61. A carrier medium comprising program instructions, wherein the program instructions are executable by a machine to implement:

reading a first copy of a primary data set in a primary memory location;

storing the first copy in a first memory location;

setting a first validity flag to indicate that the first copy is valid;

reading a second copy of the primary data set in the primary memory location;

storing the second copy in a second memory location;

setting a second validity flag to indicate that the second copy is valid;

modifying the first copy; and

setting the second validity flag to indicate that the second copy is invalid after modifying the first copy.

62. The carrier medium of claim 61, wherein the program instructions are further executable by the machine to implement:

replacing the primary data set with the modified first copy after the modifying of the first copy and before the setting of the second validity flag to indicate that the second copy is invalid;

replacing the second copy with the primary data set after the setting of the second validity flag to indicate that the second copy is invalid; and

setting the second validity flag to indicate that the second copy is valid after replacing the second copy with the primary data set.

63. The carrier medium of claim 62, wherein a first program is associated with the first copy, and a second program is associated with the second copy.

64. The carrier medium of claim 61, wherein the program instructions are further executable by the machine to implement:

reading the second validity flag in response to a program requesting access to the second copy; and

replacing the second copy with the primary data set before granting the access request if the second validity flag indicates that the second copy is invalid.

65. The carrier medium of claim 62, wherein the program instructions are further executable by the machine to implement:

creating a first index corresponding to the first copy, wherein the first index is stored in a fourth memory location, wherein the first index is created after reading the first copy from the primary data set; and

creating a second index corresponding to the second copy, wherein the second index is stored in the fourth memory location, wherein the second index is created after reading the second copy from the primary data set.

66. The carrier medium of claim 65, wherein the program instructions are further executable by the machine to implement locating the second validity flag by using the second index before setting the second validity flag to indicate that the second copy is invalid.

67. The carrier medium of claim 66, wherein an index comprises:

a first field comprising a description of a copy of the data for which the index was created; and

a second field comprising a memory location for a validity flag for the copy of the data set for which the index was created.

68. The carrier medium of claim 67, wherein the program instructions are further executable by the machine to implement:

matching the first index and the second index by comparing the first field of the first index and the first field of the second index; and

locating the second validity flag by referencing contents of the second field of the second index.

69. The carrier medium of claim 68, wherein the program instructions are further executable to implement:

reading and storing a plurality of copies of the primary data set at respective memory locations, wherein in creating a copy of the primary data set, the program instructions are further executable by the machine to implement:

setting a validity flag to indicate the copy is valid in response to reading and storing the copy; and

creating an index to the copy in the fourth memory location in response to reading and storing the copy.

70. The carrier medium of claim 69, wherein the program instructions are further executable by the machine to implement:

setting the validity flag of every copy other than the first copy to invalid after modifying the first copy.

71. The carrier medium of claim 68, wherein a first program is associated with the first copy and a second program is associated with the second copy.

72. The carrier medium of claim 71, wherein the program instructions are further executable by a machine to implement:

the first program requesting that a third program synchronize the first copy with other copies of the data set;

the third program creating the first index corresponding to the first copy in the fourth memory location in response to the first program requesting that the third program synchronize the first copy with other copies of the data set;

the second program requesting that the third program synchronize the second copy with other copies of the data set; and

the third program creating the second index corresponding to the second copy in the fourth memory location in response to the second program requesting that the third program synchronize the second copy with other copies of the data set.

73. The carrier medium of claim 71, wherein the program instructions are further executable by the machine to implement:

the first program modifying the first copy;

the first program replacing the primary data set with the first copy;

the first program notifying a third program that the primary data set has been modified; and

the third program setting the second validity flag to indicate that the second copy is invalid in response to the first program notifying the third program that the primary data set has been modified, wherein the third program is configured to manage the synchronization of copies of data sets.

74. The carrier medium of claim 73, wherein the program instructions are further executable by the machine to implement:

the second program notifying the third program that the second program desires to access the second copy;

the third program reading the second validity flag;

the third program notifying the second program that the second copy is invalid when the second validity flag is invalid;

the second program reading the primary data set and replacing the second copy with the primary data set;

the third program setting the second validity flag to indicate that the second copy is valid; and

the second program accessing the second copy when the second validity flag is valid.

75. The carrier medium of claim 73, wherein the program instructions are further executable by the machine to implement:

the second program reading the second validity flag;

the second program reading the primary data set and replacing the second copy with the primary data set when the second validity flag is invalid; and

the second program setting the second validity flag to valid.

76. The carrier medium of claim 61, wherein the program instructions further comprise a plurality of functions and an application programming interface, wherein each function is configured to perform at least one data synchronization task, and wherein the application programming interface is comprised of a plurality of function calls configured to provide external access to the functions, and wherein the function calls are accessible to a plurality of application programs.

77. The carrier medium of claim 61, wherein the primary data set is a data record.

78. The carrier medium of claim 61, wherein the primary data set is a data group.

79. The carrier medium of claim 61, wherein the primary data set is a data table.

80. The carrier medium of claim 61, wherein the carrier medium is a memory medium.

81. The method of claim 1, wherein the primary data set relates to financial transaction data.

82. The system of claim 31, wherein the primary data set relates to financial transaction data.

83. The carrier medium of claim 61, wherein the primary data set relates to financial transaction data.